IP Outdoor Rugged Dome
ACM-75x1 series

Ver. 090718

Hardware User's Manual

ACTi

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0 PRECAUTIONS

1. **Read these instructions**
   You should read all the safety and operating instructions before using this product.
2. **Heed all warnings**
   You must adhere to all the warnings on the product and in the instruction manual.

This symbol highlights several areas of concern. Please read descriptions next to each symbol carefully.

   a. Failure to follow the safety instruction given may directly endanger people, cause damage to the system or to other equipment.
   b. The requirements to make this device work, including hardware, computer settings, network settings, and operation procedures.
   c. The tips to make using this device easier, more convenient and more efficient.

3. **Servicing**
   Do not attempt to service this video device yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Trademarks

All names used in this manual for hardware and software are probably registered trademarks of respective companies.

Liability

Every care has been taken during the writing of this manual. Please inform your local office if you find any inaccuracies or omissions. We cannot be held responsible for any typographical or technical errors and reserve the right to make changes to the product and manuals without prior notice.

FCC/CE Regulation

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the

equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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1 INTRODUCTION

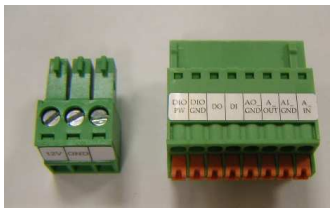
1.1 Package Contents

ACM-7501/ACM-7511

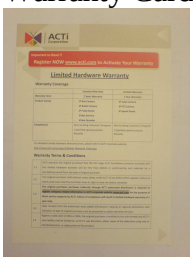
Power Adaptor (Optional)

Product CD

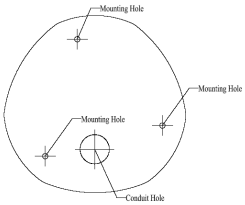
Terminal Blocks for Power, DI/O & Audio



Warranty Card



Drill Template



Drill template(scale 1:1)

Mount Screws

BNC Cable

1.2 Features and Benefits

The IP outdoor rugged dome series is a cutting-edge digital video transmission device. It can compress and transmit real time images with outstanding images quality (D1, 720x480) at reasonable bandwidth through a standard TCP/IP network. That is because it is Ethernet (LAN and WAN) ready and has the powerful ARM9 SoC and the MPEG-4 compression ASIC inside. In addition, with these powerful hardware platform, excellent SDK support and powerful respective apparatuses (e.g. the transcoder), this IP outdoor rugged dome is your best choice building up either conventional IP surveillance system or intelligent IP surveillance system.

Real-time MPEG-4 Compression

With hardware MPEG-4 compression chip inside, the composite video inputs can be efficiently compressed into MPEG-4 bit stream without any delay. The ASIC base compression engine can support not only CIF, but also FULL D1 image resolution.

Automatic Frame Rate Control

The IP outdoor rugged dome series supports automatic/manual streaming frame rate control, especially for multiple clients' concurrent access the same video stream in different network bandwidth.

Digital Time Code Embedded

The "Digital Time Code Embedded" function provides recording time and embeds it in the MPEG bit stream. Therefore, each image frame is tagged with its respective recorded time. It is very useful when users want to find the video from an exact time or between a certain time period.

DDNS Supported

The IP outdoor rugged dome series supports DDNS (Dynamic Domain Name Server). Users can set this IP device at a virtual domain name (such as cam1.Taipei.xxx) that is linked with its dynamic IP via DDNS service. Everyone can use the virtual domain name to view the video from anywhere with internet acess.

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Built-in Hardware Motion Detection

No more external motion sensors are required. Each IP device can be set with up to 3 detection areas. By tuning the object size and sensitivity, it can provide reliable motion detection in all kinds of environments. Moreover, hardware motion detection delivers better sensitivity andfaster response time than software motion detection.

Powerful Bundled Surveillance Software

To extend the capabilities of the IP outdoor rugged dome series, a powerful surveillance program is included in the package and is free to use. Users can easily utilize an existing PC to be a digital video recorder. Scheduled recording and manual recording keep every important image recorded in the local hard disk. Reliable and accurate motion detection with instant warning enables immediate response in every condition. Quick and simple search and playback function lets you easily find the images you want.

Software Development Kit Support

The IP outdoor rugged dome series can be integrated or controlled by user's application program through the Streaming Library or ActiveX control. With its high level programming interface, software developers can save a lot of time and effort while developing

1.3 Safety Instructions

Don’t use the power supply with other voltages

This device is likely to be damaged or damage other equipments / personnel if you use a power supply with a different voltage than the one marked on this device. All warranty of this product will be voided in the above situation.

Don’t open the housing of the product

Cleaning

Disconnect this video product from the power supply before cleaning.

Attachments

Do not use attachments not recommended by the video product manufacturer as they may cause hazards.

Don’t use accessories not recommended by the manufacturer

Servicing

Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Damage Requiring service

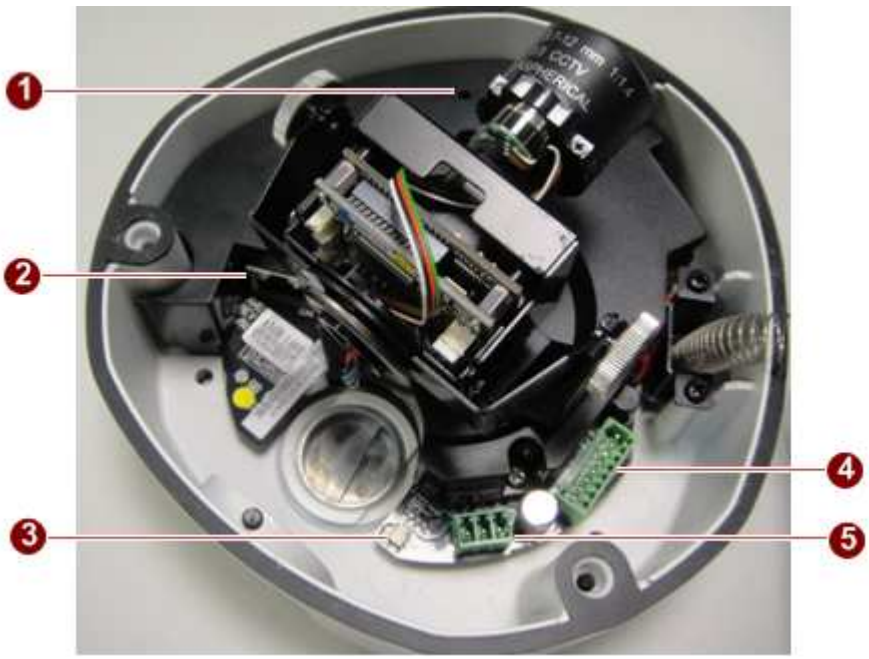
Disconnect this video product from the power supply immediately and refer servicing to qualified service personnel under the following conditions.

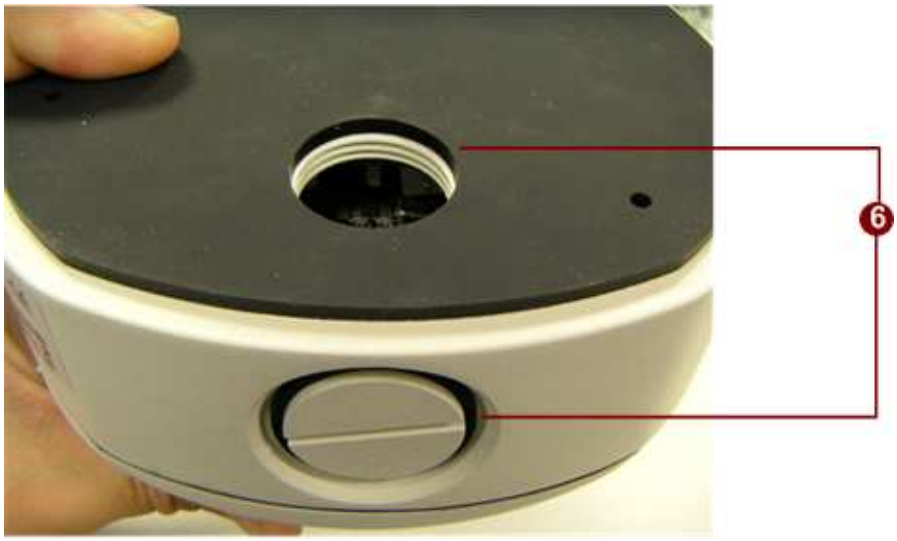
1. When the power-supply cord or plug is damaged.
2. If liquid has been spilled, or objects have fallen into the video product.
3. If the video product has been exposed to rain or water directly.
4. If the video product does not operate normally by following the operating Instructions in this manual. Adjust only those controls that are covered by the instruction manual, as an improper adjustment of other controls may result in damage, and will often require extensive work by a qualified technician to restore the video product to its normal operation.

Safety Check

Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.

1.4 Physical Description





1. **Reset Button**

Step 1: Switch off IP device by disconnecting the power cable

Step 2: Press and continue to hold the Reset Button with a pointed object. Reconnect the power cable while still holding the reset button.

Step 3: Keep the reset button depressed for at least 16 seconds before releasing it. The unit will then start up with factory default settings.

2. **Ethernet Port**

The IP outdoor rugged dome connects to the Ethernet via a standard RJ45 connector. This camera can automatically detect the best network speed when connected to other auto-negotiation(NWAY) supported devices. (10Base-T/100Base-TX Ethernet).

3. **Analog Video Output**

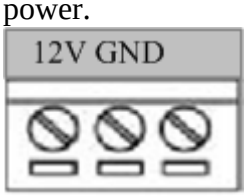
The IP outdoor rugged dome supports one channel analog video output via a special BNC cable that came with the accessory pack.

4. **Power Input Audio & Digital input/output**

PIN	NAME	DESCRIPTION
1	DIO PW	DC12VIN
2	DIO GND	DGND
3	DO	DO1_TO_OUTSIDE
4	DI	DI1_FROM_OUTSIDE
5	AO_GND	DGND
6	A_OUT	Audio_OUT_LR
7	AI_GND	DGND
8	A_IN	Audio_IN

5. **Power Input**

Connect the power adaptor here if your power input is DC12V. Please follow the description on the connector to connect to power.



PIN	NAME	DESCRIPTION
1	12V	DC Power Input
2	GND	Ground Pin

6. Conduit Hole

These conduit holes provide alternative cable routing choices for different mounting scenarios.

2 Installation Procedure

There are three types of installation of this IP outdoor rugged dome series.

	Surface mount	Flush mount	Wall mount
Pictures			
Optional Bracket required		●	●

The mounting procedure can be divided into two parts,
1st: Connecting the IP outdoor rugged dome series
2nd: Mounting the IP outdoor rugged dome series

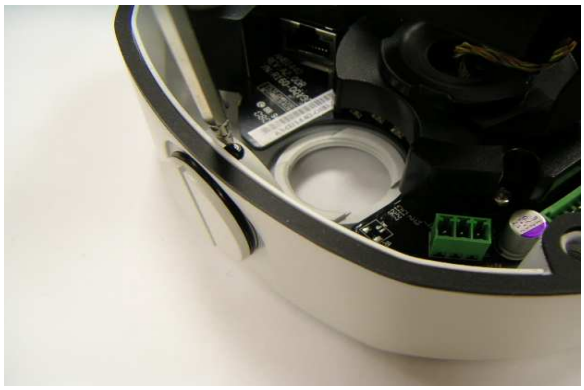
2.1 Connecting the IP Outdoor Rugged Dome

2.1.1 Remove the cover

Remove the dome cover with the special hex wrench that came with the camera in the accessory pack.

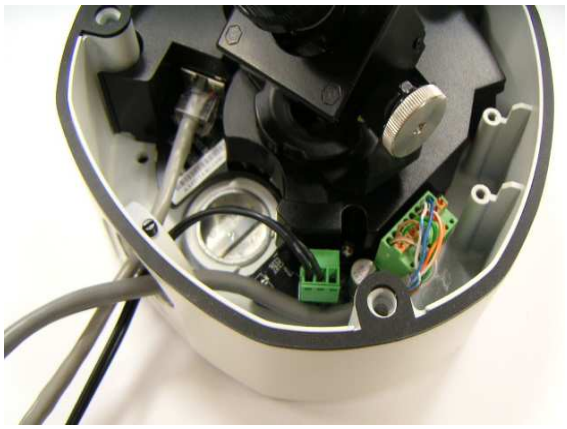
2.1.2 Insert the cable

There are two conduit holes, one is at the dome bottom and the other one is at the side of rugged dome with plug. Remove the plug if your cable will go through the one at the side of rugged dome



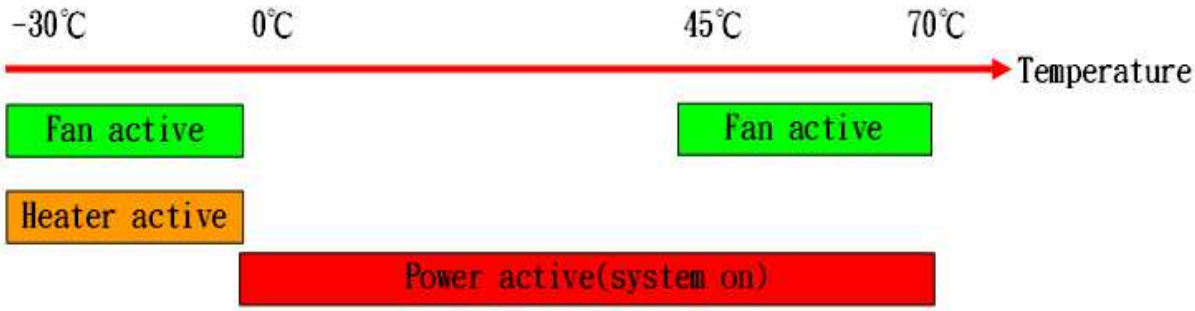
2.1.3 Connect cables to connectors

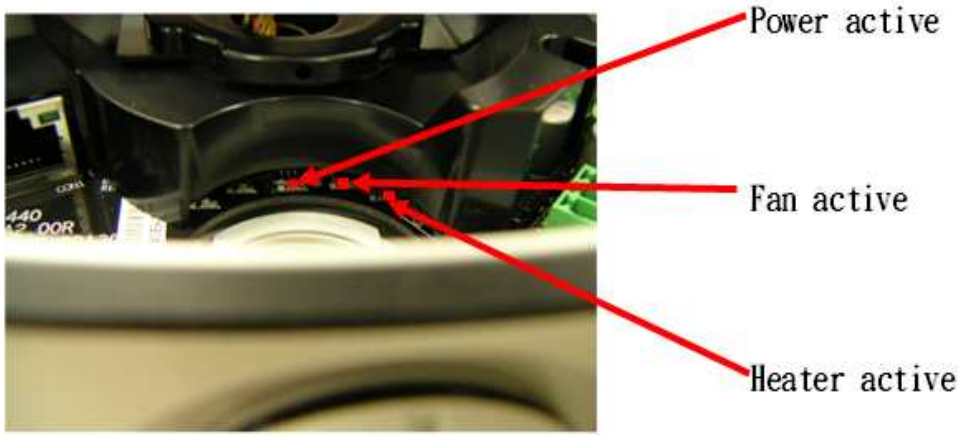
Please follow the instruction at Chapter 1.4: Physical Description, for how to connect to each connector.



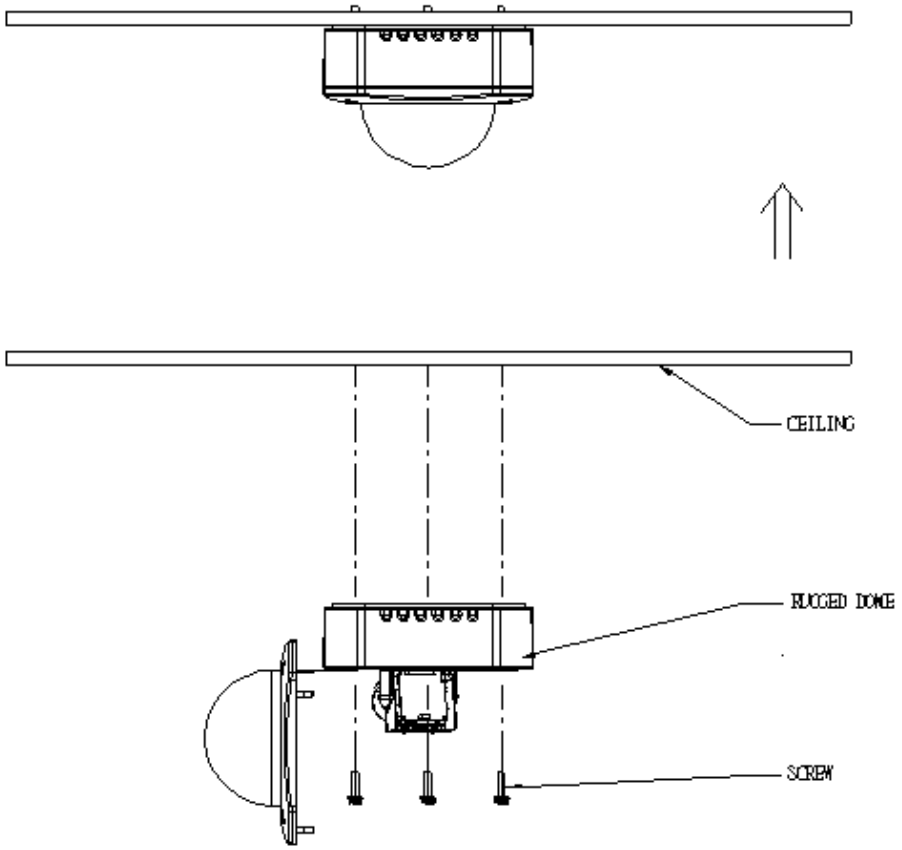
2.1.4 LED Description

There are three LEDs in the system. They are indicators for power, fan and heater respectively. According to the operating temperature, different LEDs will be lighted under different situations.

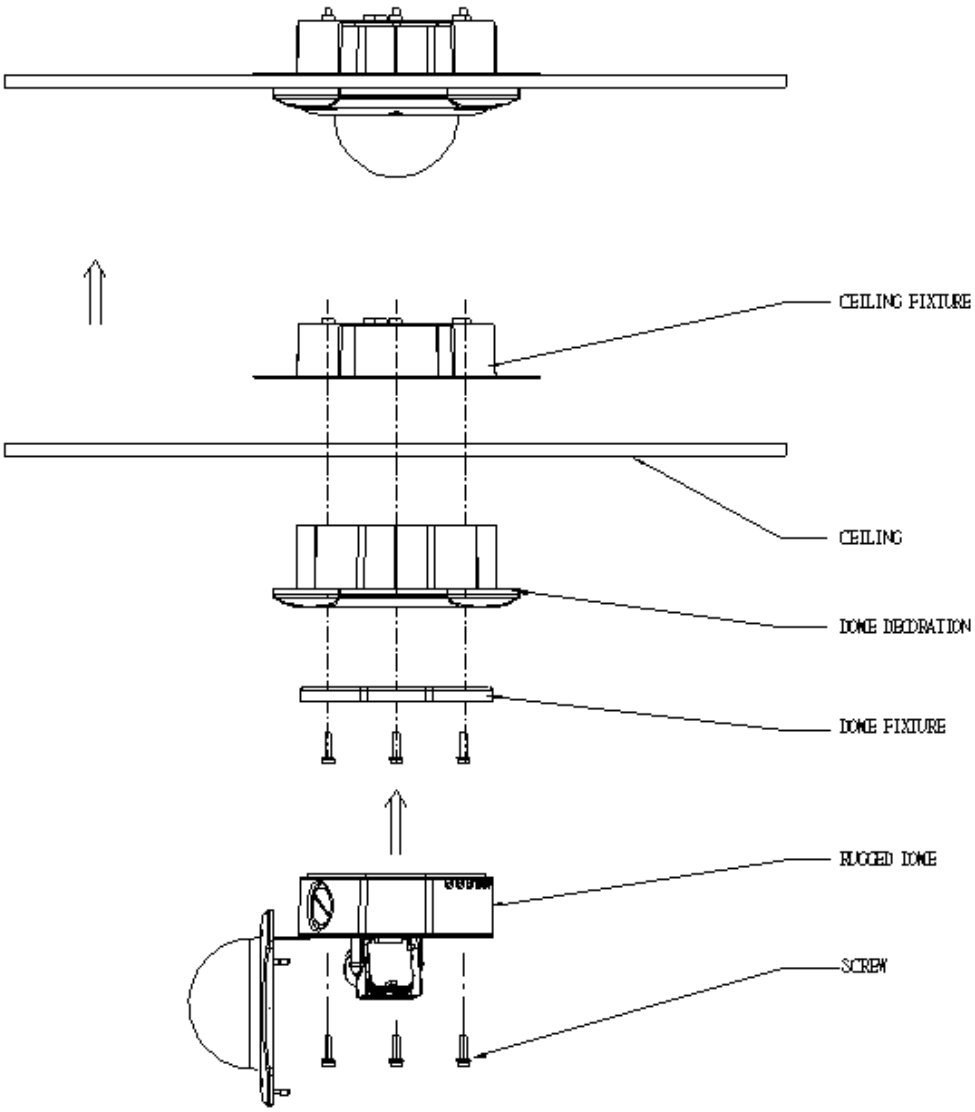




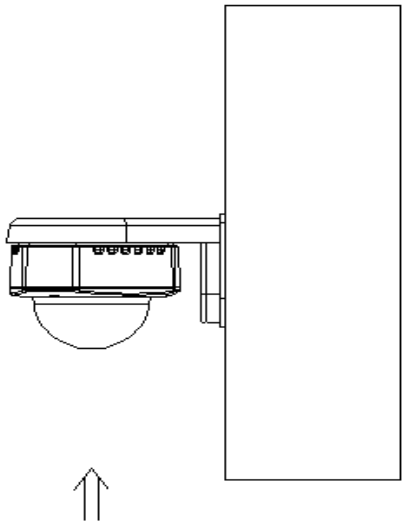
2.2 Mounting the IP Outdoor Fixed Dome (Surface)

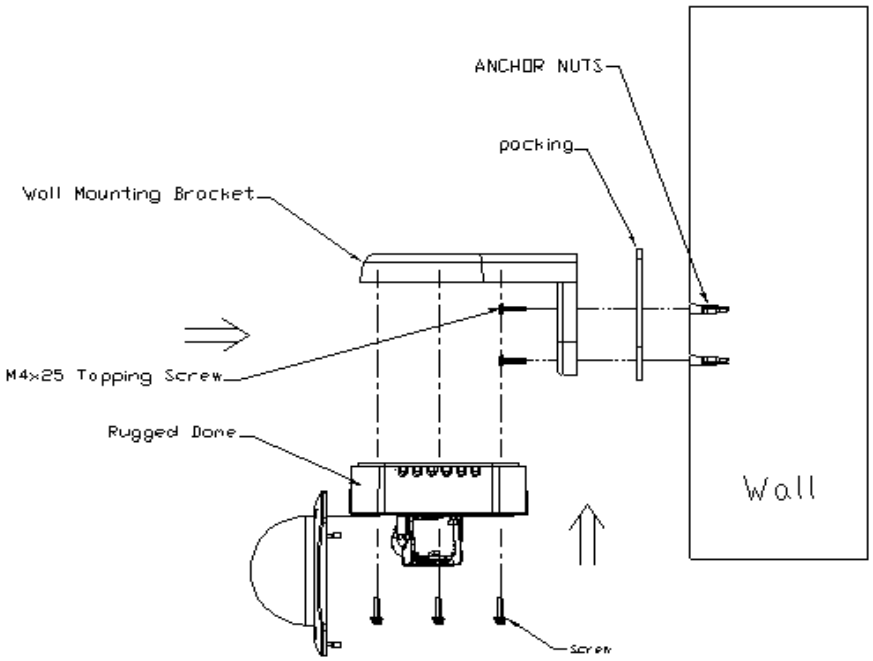


2.3 Mounting the IP Outdoor Fixed Dome (Flush)



2.4 Mounting the IP Indoor Fixed Dome (Wall)





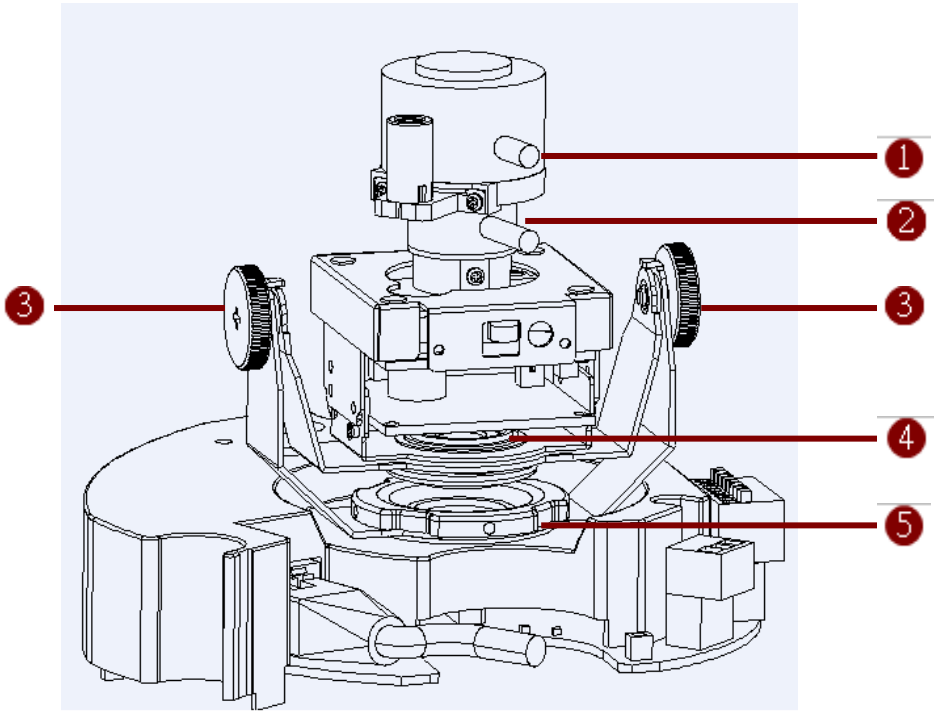
3 Adjusting the camera

3.1 Adjust zoom and focus

Please adjust the camera direction first. Then move the focus and the zoom lever at the picture 1 to adjust the zoom and the focus. Fix the zoom and focus after adjusting.

3.2 Adjust camera functions

Refer to picture 1 for what can be adjusted and how to adjust.



Picture 1

1. Focus lever
2. Zoom lever
3. Tilt adjustment screw
4. Image adjustment axis
5. Pan adjustment screw

4 Product Specification

		ACM-7501	ACM-7511
Image	Device	SONY SuperHAD CCD	SONY ExviewHAD CCD
	Size	1/3" inch	
	Effective Pixels	811 X 508 (NTSC); 795 X 596 (PAL)	
	Horizontal Resolution	540 TVL	
Min. scene Illumination	Color	0.15 Lux at F1.2 (30 IRE, SAGC)	Color mode automatically to B/W mode under 4 Lux
	B/W	N/A	0.05 Lux at F1.2 (30IRE,SAGC)
	CDS Sensor	N/A	
	IR Sensitivity	N/A	
Lens	Focal Length	f 3.7 ~ 12 mm / F1.4	
	Viewing Angel	76.92° ~ 22.73° (Horizontal)	
Camera Angle Adjustment	X (Panning)	0° ~ 360°	
	Y (Tilting)	0° ~ 180°	
	Z (Rotating)	0° ~ 360°	
Synchronization	Sync. System	Internal	
Day/Night Functions	Mechanical IR Cut Filter	N/A	Yes
Functions	Motion Detection	Yes (3 Windows)	
	Electronic Shutter	1/60 ~ 1/10000 sec. (NTSC) 1/50 ~ 1/10000 sec. (PAL)	
	Flickerless	1/120 sec (NTSC), 1/100 sec (PAL)	
	BLC	Yes	
	AGC	Automatic (User defined)	
	White Balance	AUTO, INDOOR1, INDOOR2, OUTDOOR1, OUTDOOR2, HOLD CURRENT, MANUAL	
S/N Ratio	S/N Ratio	Better than 44 dB	
Video Compression	Compression	MPEG-4 SP, MJPEG selectable	
	Picture Resolution	Full D1 (720x480 in NTSC, 720x576 in PAL) VGA (640x480 in NTSC, 640x480 in PAL) CIF (352x240 in NTSC, 352x288 in PAL) QCIF (176x112 in NTSC, 176x144 in PAL)	
	Bit Rate	28K ~ 3M bps	
	Image Frame Rate	30 fps at Full D1 resolution (NTSC) 25 fps at Full D1 resolution (PAL)	
Audio Input	Compression	8 kHz, Mono, PCM	
	Audio Line Input	Unbalanced, 1.4Vp-p, 1Vrms, 3.5 mm Jack	
Audio Output	Compression	8 kHz, Mono, PCM	
	Audio Line Output	Unbalanced, 1.4Vp-p, 1Vrms, 3.5 mm Jack	
Alarm	Digital Input	1, terminal block	
	Transistor Ouput	1, terminal block	
External I/O	Reset Button	Factory default	
	LED	System status	
Casing	IP66 Rated	Wateherproof casing with IP66 standard	
	Vandal Proof	Vandal proof support, durability up to 659.23 kgF	
	Mount Type	Surface / Flush / Wall	
Network	Ethernet	Ethernet(10/100Base-T), RJ-45 connector	
	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP, DNS, DDNS, NTP, ICMP, IGMP, ARP	
Software	Web Browser	Microsoft Internet Explorer 6.0 or above	
	SDK	ACTi SDK-10000	
	Security	Password protection: configured by the administrator	
Operating	Temperature	-30° ~ 50°C (-22° ~ 122° F) for DC12V; -5° ~ 50°C (7° ~ 122° F) for PoE	
Power	Power Requirement	PoE (IEEE802.3af) with Class 3	
	Power Consumption	5.3W (DC12V) w/o Heater & Fan 13.9 W (DC12V) w/ Heater On & Fan On 6 W (PoE) w/o Heater & Fan	
Physical	Dimensions (ØxL)	151.69 mm x 114.9 mm (6.0" x 4.5")	
	Weight	1040 g	